



The primary operational TBI component of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury

# Brainwaves

DVBIC Brainwaves | Fall 2008

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## Message from

**Col(sel) Michael S. Jaffee, MD**

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The Fall season... academics and sports are in the air and DVBIC is right in the action.

Education took center stage as DVBIC brought together 800 military and veterans healthcare providers for our 2nd annual military training conference on traumatic brain injury (TBI). We were honored that Representative Bill Pascrell (D), New Jersey's 8th District and co-chair of the Congressional Brain Injury Task Force, presented the conference keynote address. Rep. Pascrell also read a personal letter of encouragement from Sen. Edward Kennedy, who was instrumental in the formation of DVBIC in 1991 but was unable to attend this conference. Sen. Kennedy wrote that he shared the spirit and determination of all who ensure that our troops receive the finest medical care available.

Our DVBIC team was proud to co-sponsor the 5th Annual World Congress of the International Brain Mapping & Intraoperative Surgical Planning Society (IBMISPS). DVBIC also co-sponsored, with the Congressional Brain Injury Task Force, an international meeting on traumatic brain injury and behavioral health, which brought together top experts from around the world.

DVBIC collaborated with military and sports medicine experts to develop clinical practice guidelines for the management of mild TBI/concussion in both deployed and non-deployed settings. We also facilitated a conference with members of the NFL to address a topic of common concern to sports teams and the military — the prevention, evaluation and treatment of concussion.

DVBIC partnered with the US Department of Labor to roll out *America's Heroes at Work*, encouraging employers to hire TBI survivors and those with PTSD. With WETA-TV-FM, we launched [brainline.org](http://brainline.org), an online community resource for preventing, treating and living with TBI.

As always, we learn as we treat, bridging evidence-based research with clinical care and education.

On behalf of the DVBIC staff, I wish you an invigorating Fall season. We hope you will find helpful new information and resources in this issue of *DVBIC Brainwaves*.

"Thank you for DVBIC staff's extensive efforts in support of our wounded service members."



**Rear Admiral David J. Smith**  
Joint Staff Surgeon  
(medical advisor to the Joint Chiefs of Staff)



In September 2008, a one-day invitational conference was organized by DVBIC and the National Football League (NFL). Forty four participants from DVBIC, the NFL Mild TBI Committee, the US Department of Veterans Affairs (VA) and the US Department of Defense (DoD), with triservice representation, met to discuss the prevention, evaluation and treatment of concussion. Concussion/mild TBI is an occupational hazard shared by both football players and service members.

Experts representing the NFL and military shared current information on:

- biomarkers (measures of biological injury occurrence and possible impact)
- biomechanics and helmet design
- tracking single and multiple concussions in an individual
- sideline evaluation
- educational materials
- neuropsychological aspects of injury
- longitudinal studies
- neuroradiological evaluation
- risk communication

The NFL has been recognized for its leadership in sports concussion research, prevention and treatment. The symposium revealed that although there are some differences between combat and athletic injuries, certain aspects of concussion management are a common challenge to both the DoD and NFL. Further exploration will focus on potential collaborations.



## Guidelines for Acute Management of Concussion/Mild Traumatic Brain Injury (Deployed Setting)



The deployed setting creates its own challenges. Operational and tactical environments may influence the assessment and treatment of a concussed service member.

This Summer, DVBIC convened a consensus panel of 33 military and civilian subject matter experts to re-evaluate guidelines developed in 2006 based on operational experience and published literature gathered in the past year and a half. Their goal was to guide medics (Army / Air Force) and corpsmen (Navy/Marines) as well as medical officers who were not trained in TBI prior to this assignment.

A *deployed setting* refers to both combat and peacekeeping missions. *Concussion* and *mild TBI* are used interchangeably.

Representatives from each service branch designated by the respective surgeon generals, US Central Command (CENTCOM), the Joint Theater Trauma System (JTTS) and senior enlisted personnel (corpsmen and medics) focused on three areas: diagnosis/evaluation, treatment and follow-up/return to duty. In turn, three algorithms (flow charts) were developed as follows:

1. Medics/corpsmen serving without the presence of a general medical officer, serving downrange or perhaps at a battalion aid station
  - Guidance on which patients can be observed versus who should be evacuated for further evaluation
  - "Red flags" or complications to look out for, such as blurred vision, light or sound sensitivity, or dizziness if mixed with other symptoms (alone can be observed)
2. Medical Officer (primary care provider such as a physician, physician assistant or nurse practitioner) — guidance on basic medical management, such as how to evaluate and treat a patient (and when to evacuate)
  - Medications to use and how to prescribe them
  - After seven days, evacuation of patients who do not improve to a higher level facility (Level 3)
3. Comprehensive Evaluation of Concussion in a Level 3 Facility — intended to provide guidance for more detailed evaluation of patients with persistent symptoms

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A **traumatic brain injury (TBI)** is caused by a blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain. Not all blows or jolts to the head result in a TBI. The severity of a TBI may range from "mild" (a brief change in mental status or consciousness) to "severe" (an extended period of unconsciousness or amnesia after the injury). The terms concussion and mild TBI are interchangeable.

## Updated Mild Traumatic Brain Injury/Concussion Clinical Guidance (Non-Deployed Setting)

With increased awareness of TBI, healthcare providers in non-deployed settings may find they need additional guidance on how to treat patients with concussion/mild TBI. To address this need, DVBIC brought together experts in academic medicine and military medicine to develop recommendations and guidance for the diagnosis and treatment of concussion/mild TBI. The resulting recommendations address the evaluation and medical management of symptoms related to TBI. Imaging, specialty referral, duty restrictions, and evaluation of vision, balance and hearing are also addressed.

The Office of the Assistant Secretary of Defense for Health Affairs approved the document on May 8, 2008 for triservice use. For more information please visit the website of the Office of Secretary of Defense/Health Affairs or [http://dvbic.org/pdfs/mTBI\\_recgs\\_for\\_CONUS.pdf](http://dvbic.org/pdfs/mTBI_recgs_for_CONUS.pdf).

The new guidance elaborates and augments clinical practice guidelines previously published by the DoD. To offer further guidance, DVBIC is serving as part of a VA/DoD core group to develop clinical practice guideline management of concussion/mild TBI in the non-deployed setting.



## DVBIC and WETA-TV-FM Launch BrainLine

Brainline.org is an exciting new community resource, sponsored by DVBIC, for preventing, treating and living with traumatic brain injury. Brainline.org offers authoritative, useful, and timely information and resources:

- Fact sheets and TBI basics
- Personal stories
- Video interviews and roundtable discussions with experts in the field
- Information on symptoms and treatments

- Strategies and tools
- Research and resources
- And more

BrainLine includes special sections for people with TBI, their families and friends, and the professionals who work with them. Featuring new information each week and availability 24/7, the site is designed to help people gather information, learn about new research and find a community of support and hope.



## DVBIC Partners with America's Heroes at Work

Employment can play a significant role in recovery for wounded and injured veterans. Responding to the challenges faced by service members and veterans who have sustained a traumatic brain injury (TBI) and/or post-traumatic stress disorder (PTSD), the US Department of Labor (DOL) initiated *America's Heroes at Work*. This project equips employers and the workforce development system with the tools they need to help service members, returning from Iraq and Afghanistan with TBI and/or PTSD, to succeed in the workplace.

*America's Heroes at Work* offers materials such as fact sheets, web-based training tools and educational presentations. These multimedia resources are targeted for employers, workforce development professionals, service branches, key military support systems, veterans service

organizations and DOL One-Stop Career Centers.

DVBIC developed the TBI related educational materials published by *America's Heroes at Work*. DVBIC National Director Col (sel) Michael S. Jaffee underscored the importance of the program by appearing in a video produced in conjunction with the roll-out on August 20, 2008. Information and downloadable print materials can be found at [www.americasheroesatwork.gov](http://www.americasheroesatwork.gov).

Related to these efforts, on October 1, DVBIC participated in a federal roundtable on TBI/PTSD employment issues, hosted by Neil Romano, DOL Assistant Secretary for Disability Employment Policy and Charles Ciccolella, DOL Assistant Secretary for Veterans' Employment and Training Service (VETS).

## DVBIC Presents 2nd Annual Military Training Conference on TBI

Over 800 military and veterans healthcare providers, representing 25 medical specialties, convened in Washington, DC on September 25-26, 2008 to learn the most up-to-date information on mild to severe traumatic brain injury. Topics covered clinical practice and research relevant to screening, treatment and rehabilitation. Many attendees traveled across the nation as well as from duty stations in Japan and Germany.

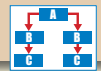
The conference keynote speaker was Representative Bill Pascrell (D), 8th District, New Jersey. Rep. Pascrell founded and is co-chair of the Congressional Brain Injury Task Force. The *Deborah L. Warden, MD Lectureship* was presented by David A. Hovda, PhD, Director, UCLA Brain Injury Research Center. Closing remarks were provided

by US Air Force Academy graduate and three-time Super Bowl champion, Chad Hennings, formerly of the Dallas Cowboys. Conference speakers included experts from all branches of service, the VA and civilian experts.

Attendees received guidance on the implementation of new policies for pre-deployment neurocognitive testing using the Automated Neuropsychological Assessment Metrics (ANAM), clinical practice guidelines for the management of concussion/mild TBI in deployed and non-deployed settings, ICD-9 coding and surveillance efforts. Twenty-four break-out sessions provided attendees with the opportunity for in-depth learning and interaction with experts in their field.

## Guidelines for Acute Management of Concussion/Mild Traumatic Brain Injury (Deployed Setting)

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- Conduct appropriate radiological testing, such as a CT scan
- Perform neurological and neuropsychological testing
- Manage patient up to 14 days and then evacuate to a higher level facility if needed

Overarching guidelines for managing concussion/mild TBI are as follows:

- Provide rest in a reduced - stimulus environment (a quiet, comfortably lit area)
- Educate the patient on the normal sequelae after concussion and the expectation of recovery
- Appropriately evaluate the patient for return to duty to ensure not only the service member's health and welfare but also the unit's. The safety of each unit member affects the safety of the group.

The guidelines were staffed and approved through the office of the Joint Chiefs of Staff Surgeon and provided to USCENCOM via the Joint Theater Trauma System (JTTS). Guidelines will be available on the Theater Medical Data Store, formerly Joint Patient Tracking Application, in the near future. Guidelines are planned to be incorporated into medical pre-deployment training.

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